

GRUMMAN

plane news

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Grumman Corp. reports jump for 9-month sales, earnings

Grumman Corporation reported last week a dramatic jump in sales and earnings for the first nine months in 1973 when compared to the same period last year, with that increase receiving a helpful boost from a 27 percent increase in commercial sales during the same period. Consolidated net earnings for the first nine months of '73 were \$20,632,353—equal to \$3.03 per share—on sales and other income of \$728,396,715. For the same period last year, net income was \$1,360,577 or \$.20 per share on sales and other income of \$475,377,090. As a result of subsequent events on the F-14 program, a net loss was reported in '72.

In 1973, net earnings for the three-quarter period were \$12,632,353 or \$1.86 per share of income before extraordinary item. The extraordinary item, \$8,000,000 or \$1.17 per share, represented a Federal income tax benefit arising from the utilization of net operating loss carryovers from 1972.

It was also reported that the estimated pre-tax loss on the first five lots of the F-14 Tomcat, originally \$205 million, was increased by \$15 million as a result of recently completed negotiations with the Navy. The loss, which was taken as a further write-down of F-14 inventory, was explained as a necessary forerunner to the 1974 fiscal year buy of 50 Tomcats by the Navy—now pending approval by Congress—and to potential foreign sales. This additional loss is reflected in the nine-month financial statement.

The forecast for all of 1973 looks as heartening as the first nine months for Grumman Corporation — earnings for the year, including extraordinary item, should be \$4 per share or better assuming the current national energy crisis does not adversely affect normal plant operations.

Commercial sales for the nine months amounted to approximately

Paper shortage

Sorry, folks, we've been caught in the paper shortage. We have been limited to 8-page editions and it's not likely to change. Look for a supplement distributed through ESO in the next couple of weeks. Our next regular issue, the last for 1973, will be distributed on December 17.

\$100 million, a 27 percent increase over comparable 1972 figures, and commercial contributions to overall earnings—before extraordinary item—doubled, accounting for about 36 percent of the consolidated total. Included in this sales jump were increased sales in Gulfstream IIs and Ag Cats by Grumman American, and truck bodies, yachts, canoes, and motorhomes by Grumman Allied Industries.

The merger of Grumman Gulfstream and Ag-Cat programs with American Aviation, which resulted in the creation of Grumman American Aviation Corporation, permits its inclusion in the Corporation's consolidated tax returns. As a result, carry-forward losses incurred by American Aviation in prior years can be utilized to reduce current Federal income taxes. In accordance with accounting practices recommended by the Securities and Exchange Commission, the Corporation used \$3,732,000 of such tax benefits realized in the first nine months of 1973 to reduce its investment in Grumman American. Of this total, \$2.1 million or \$.11 per share was included in net income figures for six months ended June 30, 1973.

GDS to assist European fighter tests

The first of 14 persons from Grumman Data Systems departed from Kennedy International Airport yesterday, bound for Munich, Germany, where they will assist Messerschmidt-Bolkow-Blohm (MBB) on the flight test program for the European Multi-Role Combat Aircraft (MRCA). On Thanksgiving weekend, the rest of the contingent, including programmers, flight test engineers, and systems analysts, is scheduled to leave for Munich.

The move was set in action by the signing two weeks ago of an \$800,000 contract by GDS with Messerschmidt-Bolkow-Blohm to develop special software—various computer and associated programs — for the MRCA flight test effort. The main areas these software programs will cover are aircraft propulsion, performance, and stability and control.

Interest in GDS involvement in the MRCA program began some time ago.



Greatly Impressed. On Oct. 27, VAdm. William D. Houser, (left) Deputy Chief of Naval Operations for Air Warfare, took a back-seat flight in the F-14 Tomcat. With Chief Test Pilot Chuck Sewell (center) at the controls, Adm. Houser flew a 50-minute flight in aircraft No. 2 out of Calverton. According to Sewell, Adm. Houser was greatly impressed with the flight and is looking forward to his trip to NAS, Miramar, Calif., so he can qualify to fly the Tomcat himself. Also pictured is Capt. Robert Belter, NAVPRO (right).

It started with a report written for MBB by Charles Schiano of GDS that highlighted the contributions of the GDS and Grumman Aerospace Automated Telemetry Station to the F-14 flight development program. In his report, Schiano explored the techniques developed for flight test analytics, data processing, and flight test coordination and planning that enabled GDS and Grumman Aerospace to conduct a very successful test program on the Tomcat.

That prompted a visit by an MBB official to Calverton. There he was briefed on the software program and got a live demonstration of the ATS during an F-14 test flight. From that tour of the ATS a further inquiry came from MBB on possible GDS support on the MRCA program.

Early in September, Ray LeCann, director of Telemetry Products for GDS, Schiano, Frank Finnerty, and

Fred Jinks spent about four weeks in Munich working with MBB officials on contract proposals, costing, and negotiations. That effort resulted in the \$800,000 contract announced recently.

GDS is now pursuing flight test software contracts with British Aircraft Company and Aeritalia, partners with MBB in the MRCA program.

Earlier this year, the United States Air Force awarded Grumman Data Systems a \$4 million contract to develop an Automated Flight Test Data System to support the flight development program of the B-1 bomber at Edwards Air Force Base. The system is patterned after Grumman's Automated Telemetry Station, the first of its kind in the aerospace field. In its final configuration, the Air Force system being developed by GDS will simultaneously support real-time and batch scientific processing, timesharing, and range data-analysis.

Grumman trio visits A-6 sites

Visiting the other side of the earth seems to be a yearly venture for Bill Trillo, Dan Collins and Nick Scobbo, the A-6 program director, A-6 deputy director and director of Field Service, respectively. Last year the three traveled to the Pacific to visit various military commands and see if Grumman Aerospace products were performing satisfactorily in the field. The trip proved to be so productive and valuable last year that the traveling trio hit the road again recently.

On their three-week field trip, they visited the various commands and squadrons that direct and operate the A-6 Intruder family. By seeing and talking first hand with the Navy, the trio was able to make immediate recommendations and evaluations of top-priority field problems. According to Trillo, this type of interest in the "Operational Readiness" of the Intruder in the field drew high praise from the "flag rank" at the commands, squadron skippers, and crews alike.

Intruder gets 'star' passenger



Earlier, Vice Adm. William Rapp, who commands the Third Fleet, flew in the right seat of an Intruder when he came aboard the carrier Kitty Hawk during RIMPAC (Rim of the Pacific) naval exercises. The admiral went aboard Kitty Hawk to observe the war games in the 11-day exercise in international teamwork which involved units from the U.S., Canada, Australia, and New Zealand.

Hawkeye unit hails new chief . . .

Cdr. James R. O'Kelly recently became the new commander of VAW-113—known as the Black Eagles. The former executive officer took command of the E-2 squadron from Cdr. John E. Bley Jr. More than 200 people were on hand to view the ceremony with Capt. L. S. (Scotty) Lamoreaux, commander of the Fighter/Airborne Early Warning squadrons of the Pacific Fleet, as the guest speaker.

The Black Eagles recently returned from a nine-month deployment to the Western Pacific aboard the U.S.S. Enterprise, making it their fifth deployment since its inception in April 1967. When the E-2 squadron returned, 40 of its members were decorated for their individual efforts during the last few months of the Vietnamese Conflict.

. . . and Golden Hawks start soaring again

In the spring of 1974, the Golden Hawks of VAW-112 will once again be flying Hawkeyes off a carrier deck—this time from the USS Ranger—while providing airborne early warning support for the Pacific Fleet. And the Hawks are looking forward to sea duty—they're been temporarily deactivated since May of 1970. When they sail again, the men of VAW-112 will be commanded by Cdr. M. W. Parsons Jr. Nearly six years ago, the Golden Hawks deployed to the Western Pacific aboard the carrier Enterprise to support air wing strikes against North Vietnam. VAW-112 flew more than 2,500 accident-free flight hours in 648 sorties during that tour.

Following a rest period in the States, Enterprise was once again off for the combat zone. A few days after leaving San Diego, however, a rocket exploded on the flight deck, causing extensive injuries to Navy men and damage to aircraft on the flight deck—two of which were E-2s. There followed a period of repair for the Enterprise, and two Hawkeyes lost in the conflagration had to be replaced. Back on the line two months later, the "Big E" sent its planes on interdiction missions of the Ho Chi Minh trail, and when the North Koreans downed an American surveillance plane in the Sea of Japan, the Golden Hawks provided AEW support for the Enterprise when the big attack carrier moved into that danger zone.

Following its return to the Naval Air Station at North Island, VAW-112 was temporarily de-activated in May '70. Now the Hawks will be flying Grumman E-2Bs from the Ranger. Welcome back, fellas!

Tracker still snuffing out threats

There aren't many people around—even air pioneers—who could trace the use of special aircraft for wildland fire control to its origin. Shortly after World War I, Major Henry (Hap) Arnold, who was to become a legend in the U.S. Air Force in later years, first proposed using Curtiss Jennys to report fires in California forests. Through the years, many other types of aircraft have been used as aerial fire watchers and later as airtankers that dropped chemicals to help snuff out forest fires.

Since 1969, the California Division of Forestry has been employing modified Grumman S-2 Trackers for fire fighting, and the planes have proved so successful that the state has acquired a total of five to help with the job. According to forest officials, the Tracker offers greater speed, range, flight safety, and cargo-carrying capacity than the plane formerly in use, the TBM. At one time, the Tracker hunted and eliminated undersea threats to the U.S. Navy. In California today, the S-2 searches out and helps eliminate another threat to life and property—forest fires.

Admiral takes a break . . . flies as 'B/N'

It was probably the first time that a two-star admiral ever flew as Naval Flight Officer . . . and though Rear Adm. Dennis-James Downey enjoyed the flight, it's not likely he'll trade in his present job for that of an A-6 bombardier/navigator. Admiral Downey is not an aviator—he's Commander Cruiser-Destroyer Group 8—but when members of VA-176 aboard the USS Franklin Delano Roosevelt (the admiral's flag ship) asked him if he'd like a flight in the Intruder, he quickly accepted. During the flight with Lieutenant Rudell, Admiral Downey operated the search radar—normally the job of the b/n—and did a "superb" job, said the pilot. (Could he say less?). Before the admiral went back to his flag responsibilities on the Mediterranean cruise, reports Grumman Field Service rep Leo Schwarz, the men of VA-176 presented him with a squadron cap, flight jacket, log book, and an honorary membership in the attack squadron.



Piece of cake. Having just returned from flight in Grumman Intruder, Rear Adm. Dennis-James Downey (R) seems exuberant in describing his hop to Cdr. Guy Cane (L), Commander Carrier Air Group 9, and Cdr. John McKenzie, skipper of VA-176.

World's astronomers awaiting arrival of celestial 'superstar'

If Kohoutek sounds like just another foreign word, then all you have to do is wait a few weeks for Comet Kohoutek to become the newest superstar and astronomy to become a major U.S. preoccupation. Just about everyone will be watching the mysterious phenomenon which around Christmastime, some experts predict, may be one of the brightest comets of the century.

Now hurtling through space, Comet Kohoutek is becoming more and more distinguishable every day. It will take on its most spectacular appearance as it approaches the sun when heat from solar radiation will drive material off its frozen nucleus, creating the long

glowing tail that is generally associated with comets.

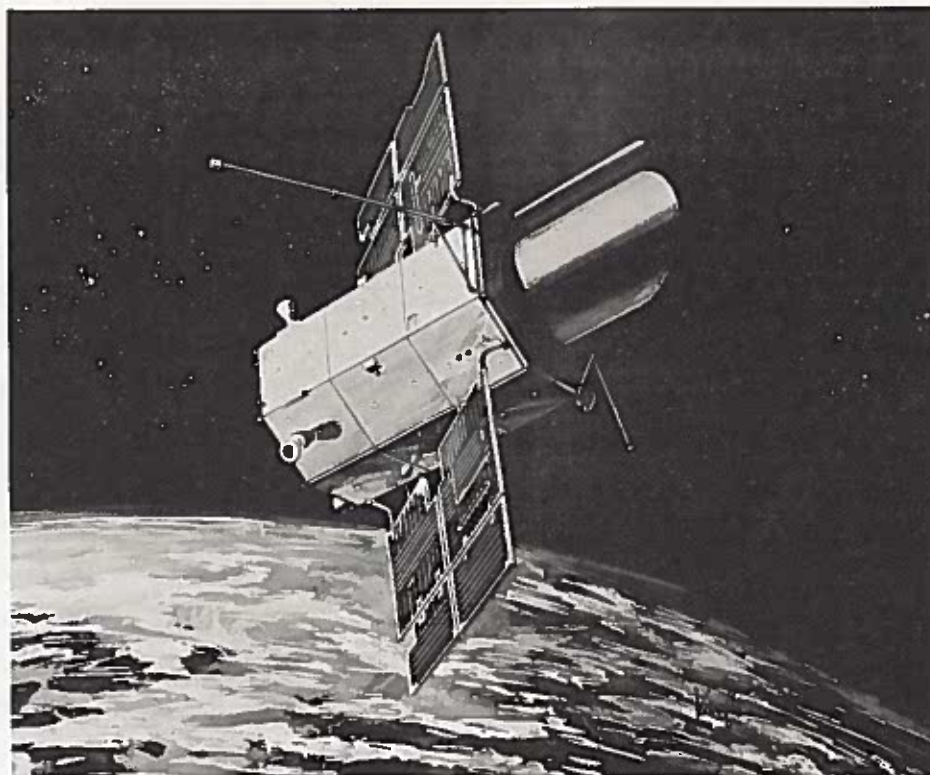
No one knows for sure what the magnitude of the comet will be when it is at its brightest. Estimates already range from as bright as the brightest planets, such as Jupiter, to the brightness of a quarter moon that will be visible in daytime.

Comet Kohoutek may be the best observed comet of all time, too. The orbiting Skylab will be on hand, equipped with sounding rockets, telescopes and cameras, and the Grumman-built Orbiting Astronomical Observatory "Copernicus", circling the earth since 1972, is now being prepared to focus its telescopes on the comet. NASA has organized an "Operation Kohoutek" under the management of the Goddard Space Flight Center to coordinate space and ground-based studies of the comet. In addition, scientists plan intensive studies in visible ultraviolet and infrared light with optical telescopes, radio telescopes and radar; there will be many other observations from the ground and from high-flying aircraft; and there will be untold numbers of backyard astronomers with binoculars, telescopes and just about every type of stargazing apparatus imaginable.

Photo discovery

Comet Kohoutek was discovered only last March by Dr. Lubos Kohoutek, a Czechoslovakian astronomer who works at the Hamburg Observatory in West Germany. According to Dr. Robert D. Chapman of the NASA/Goddard Space Flight Center, the discovery was made like this: "On the night of March 7, 1973, he (Dr. Kohoutek) took several photographs of a portion of the sky in the direction of the Constellation Hydra, the sea serpent, using the 32-inch Schmidt telescope at the Observatory. Later, when he studied the developed photographic plates, he noticed a faint, fuzzy spot of light on the plates. Two nights later he photographed the same region of the sky and again the faint, fuzzy spot appeared on his photographic plate, only it had moved a fraction of a degree to the west-northwest of its original position. Could it be that Dr. Kohoutek had discovered his second comet in a little over a week? On February 28, he had discovered a comet while taking photographic plates for a similar project. By March 21, the moon had moved far enough away from the suspected comet that Dr. Kohoutek could obtain another series of plates. Sure enough, the fuzzy image was again visible, but during the intervening time, not only had it moved, it had also increased in brightness. Indeed, a new comet had been discovered."

When Comet Kohoutek was discovered, it was more than 400 million



Ready for Kohoutek. The Grumman-built Orbiting Astronomical Observatory—circling the earth since 1972 and designed to conduct detailed studies of the composition of interstellar space—is being prepared for Comet Kohoutek observations. The 5,000 pound OAO carries experiments provided by Princeton University and the University College London.

miles from the sun. At that time the comet appeared as a faint, fuzzy patch of light, the fuzzy spot being a cloud of gas called the coma. During the few days that Comet Kohoutek is at its brightest, about December 28, a bright starlight point of light may appear in the coma, called the nucleus of the comet. The most spectacular characteristic of the comet will be its tail which will develop as it nears the sun and could become as long as 100 million miles. The tail will always point away from the sun.

Comet Kohoutek has already been observed in the morning sky. By mid-December, however, no optical aid should be needed to see it. Starting about December 1, the motion of the comet will become predominantly eastward so that on successive mornings,

about one hour before sunrise, the comet will be nearer the horizon, and by December 19, it will rise only one hour before the sun. For the next nine days the comet will be observed in morning twilight and it is during this period that the comet may be at its most spectacular. Beginning January 2, it will set more than one hour after the sun and then will be observed in dark skies.

'Dirty iceberg'

What is inside a comet? While there are different theories, one generally ascribed to was stated in the early 1950s by Dr. F. L. Whipple of the Harvard College Observatory who proposed that the nucleus of a comet is, in effect, a "dirty iceberg", a large mass of

(Continued on page 5)

Play it safe . . . stay off runway

A straight line may not always be the shortest route between two points. Take the runway that lies between Plant 4 and Plant 2, for instance. That's probably the most inviting shortcut between plants at Bethpage, but inviting as it is, that shortcut could prove to be the longest way home for someone some day.

Walt Berndt, airport manager at Bethpage, cautions Grummanites that using the runway as a shortcut—day or night—could prove disastrous. Company vehicles that use the runway for flight operations, repairs, cleaning, etc., have to follow stringent safety rules; Tower Operations gives them clearance when there is no danger from incoming or outgoing flights.

One of the most dangerous times for vehicular traffic, Berndt says, is after dark when the tower is not manned. During that period, vehicular traffic and pedestrians are prohibited from using the runway as a shortcut.

But there have been times in recent months when drivers assume that there will be no flight traffic because it is night and the tower is not manned. *That could be a fatal mistake*, Berndt warns. Occasionally, visiting aircraft drop in after dusk, and sometimes other planes land at Bethpage in emergencies. Should a vehicle be crossing the runway during these times, it could prove disastrous to the driver and passengers in the vehicle, and to the occupants of the plane as well. And because of the proximity of buildings and parking lots, an accident might cause further destruction to Company and private property, too, as well as endanger other lives.

"Please observe airport safety rules," says Berndt. "Don't use the runway as a shortcut at any time, even should it look inviting—it could be the longest shortcut you ever took."

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Capturing a superstar

If you're an amateur photographer, here's an opportunity to prove your skill by competing with other Grummanites in a Comet Kohoutek photo contest. The winner will receive a \$25 U.S. Savings Bond.

The contest advisors recommend using a tripod-mounted camera loaded with high-speed black and white or color film. Set the "f" stop wide open and use a cable release to decrease the chance of movement of the camera. While exact settings will have to be determined according to the comet's brightness, recommended exposures should be bracketed between 1/50 and two seconds. Best results will probably be attained just before dawn or at fading dusk.

The contest rules are:

- Amateurs only.
- Telescopes are permitted, but equipment is limited to that normally found in photographic stores.
- Identify each photo submitted with the entrant's name, type of film, exposure time, place taken and equipment used.

Submit all entries to Dick Dunne, Public Affairs, Plant 40. The contest ends March 15, 1974. Judges will be Henry Courten, Dick Dunne, and Dick Milligan.

service milestones

40

Norman J. Egloff, Procurement Mgmt. (5)
John Pavese, Corporate Suggestions (5)

35

Thomas G. Smith, B/P Warehouses (37)

30

Louis R. Purga, Router & Shear (2)
Arnold L. Brandt, Router & Shear (2)
James E. Lundstrom, GSE Mech. (2)
John E. Juppe, Tanks & Ducts (2)
Charles Riegelsperger, Steel Parts Assembly (2)
Malvin McBride, Hydraulics (2)
Charles G. Fredericks, E. B. Weld (2)
Ruth H. Carr, Release & Control (2)
Edward A. McNally, Mach. Ops.-Tech. Serv. (3)
Anthony Chayka, GSE Mech. (5A)
Irwin R. Krutsch, Power Plant (5)
Harry R. Milne, Transport. Office (20)
Joseph W. Novak, Proj. Engg. Mgr. (25)
Edward J. Warenik, Prod. Plt. (27)
Henry M. Zemruski, Struct. Design (35)
Harold L. Zeller, Assembly Meth. & Planng. (36)
Ronald C. Smith, Tool Maint. & Repair (36)
Richard W. Newton, Struct. Design (36)
Alfred Handel, Router & Shears (37)

25

Thomas E. Ryan, Project Admin. (1)
William O. Wagner, Prod. Plt. (2)
James F. Green, Heat Treat. (2)
Charles F. Myers, Heat Treat. (2)
Gunnar Enstad, Prototype (2)
Dwight G. Hutchinson, Prod. Control (2)
Orville W. Goldson, Methods Engg. (2)
Louis J. Foster, Machine Shop (2)
Walter Ganss, Spec. Tools & Methods (2)
Eberhard Dullberg, Spec. Tools & Methods (2)
Henry L. Fazzari, Optical Tool & Metrology (2)

20

Kenneth Williams, Maintenance (2)
Robert F. Dunlop, Mach. Ops. - Parts Ctl. (3)
John B. Lennon, Prod. Release & Anal. (3)
James B. Middleton Jr., Mech. Struct. & Proto (5)
Gustave J. Nicolosi, Electronics Repair (5)
Joseph F. Diehl, Prod. Release & Anal. (5)
Joseph Barbetta, Business Development (5)
William J. Sontag, Structures (6)
Albert E. Ryan, Jr., Flight Avionics (8)
Arthur E. Pope, Maintenance (12)
Chester Shilstone, Major Assembly (27)
Anthony J. D'Amato, Sect.-Sub Assembly (27)
John M. MacKenzie, Inspect.-Mech. (27)
William A. Ulrich, General Purchasing (30)
Henry O. Sjoman, Technical Staff (30)
William J. Groth, Plan-out of Plt. Support (34)
Gerard M. Maurer, EA-6B Prog. Mgmt. (34)
John W. Lang, Environ. Control Des. (42)
Jack Cabre, Mat. Control (77)
Arthur B. Emmons, Elec. Sub-Assembly (77)

Frederick D. Larrick, Sub-Assembly Major (1)
John H. Gross, Crew Systems (1)
John W. Laundis, Assmb. Tool & Hand Equip. (2)
Harold Lurz, Mach. Ops. - Tech. Services (3)
John Geremia Jr., Mach. Ops. - Parts Ctl. (3)
Charles A. Holzler Jr., Q. C. Lab. (3)
Frederick W. Shepherd, Aero Test (5)
Barbara A. Seaman, Contracts A/C (5)
Joseph J. Zummo, PT./Proj. Engg.-Prog./Planning Ops. (6)
Edward T. Ramshaw, Plant Protection (6)
Robert Safar, Plastics/Plaster Tooling (11)
Lawrence C. Neuroth, P/S Tech. Writing (15)
William R. Schooley, Structural Design (25)
Edward M. Thomas, Structural Design (73)
Wing Lee, GDS
Jane Wiswell, GDS
William O. Dehner, Grumman Corp.

John D. Conover, Power Plant, Design (1)
Joseph V. Licari, Proj. Eng'g Ops (1)
Irene E. Gaden, Food Service (2)
Salvatore C. Sangemino, Prod. Plt. (2)
Peter Sikoryak, Simulation (4)
Erling N. Olsen, Conventional Mach. (5)
Frederick F. Zapf, Pwr. Generate & Conv. (5)

(Continued on page 7)



T. E. Ryan



W. O. Wagner



J. F. Green



C. F. Myers



G. Enstad



D. G. Hutchinson



O. Goldson



L. J. Foster



E. Dullberg



H. L. Fazzari



K. Williams



R. F. Dunlop



J. B. Middleton



G. J. Nicolosi



J. F. Diehl



J. Barbetta



A. E. Pope



C. Shilstone



A. J. D'Amato



J. M. MacKenzie



W. A. Ulrich



H. O. Sjoman



W. J. Groth



G. M. Maurer

Ask less cards, more donations

If you feel a little silly about sending holiday greetings to your co-workers when you know you'll offer them your good wishes personally, here's a solution to your problem that will also provide a tangible expression of good will for many others. Within Technical Operations and Advanced Systems Technology in Grumman Aerospace, members of these two organizations are being encouraged to refrain from sending cards to fellow employees and contribute the money saved to a worthy cause.

At strategic locations within the two departments, large greeting cards will be on display, accompanied by collection boxes. Each person who wishes to participate may sign the card and drop a contribution to a happier holiday into the box. Each evening these funds will be collected. At the conclusion of the drive, these monies will be distributed to needy families through the Christmas fund committees of Product Engineering and Product Support. (By the way, this type of contribution doesn't eliminate the need of the annual collection taken up throughout engineering for assistance to needy families.)

If you see giant greeting cards suddenly appearing throughout Grumman Aerospace, please stop, sign, and drop. There will be a lot of people who are happier for it.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

ANTHONY A. ODDO of Product Support, Plant 2, died November 7 at the age of 48. He had worked for Grumman Aerospace since 1958 and lived at 485 S. Seventh St., Lindenhurst.

VINCENT J. O'BRIEN of PPO- F-14, Plant 1, died November 8, at the age of 54. He had been with the company since 1963 and lived at 145 Stratford Rd., New Hyde Park.

FRANCIS P. O'HARA of B/P Warehouses, Plant 21, died November 9 at 61 years of age. He had been with Grumman more than 30 years and lived at 1741 E. 51st St., Brooklyn.

EDWARD PIAT JR. of Instrumentation Test, Plant 5, died November 10 at the age of 43. He had been with Grumman Aerospace since 1949 and lived at 14 Oakwood Ave., Farmingdale.

JOHN MCCARTHY of Plant Protection, Plant 18, was 61 years of age when he died on November 11. He had been with Grumman since 1942 and lived at 8 Cleveland Pl., Glen Cove.

CHARLES V. YANCAR of Parts Paint, Plant 27, died November 17 at the age of 37. He lived at 23 Glenmore Ave., Brentwood, and had worked at Grumman since 1965.

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Keep 'em coming. When the folks at Stuart, Florida, were ready to ship the first F-14 aft section completed at the Plant 77 facility earlier this month, they all gathered near the assembly (wrapped in a protective tarpaulin) to mark the big event. In saluting the Stuart team on its accomplishments, Joe Gavin, Board Chairman and President of Grumman Aerospace, said: "Your team has worked hard and your achievement is admirable. My personal thanks to you all. Keep 'em coming." (Stuart photo)

Astronomers await next 'superstar'

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frozen water, methane, ammonia, carbon dioxide and perhaps other constituents in which is imbedded meteor-like solid particles of various sizes.

The phenomenon of comets in many ways is as mysterious today as it was to Greek philosopher Aristotle who recorded his views on comets in the 4th century B.C. as "exhalations" in the outer reaches of the earth's atmosphere. Many theories and counter-theories have come forth since then, and still comets remain ancient mysteries.

Even Dr. Chapman puts a damper on those enthusiasts who may be expecting to see nightly extravaganzas: "Those of us sitting on the edges of our chairs awaiting the appearance of Comet Kohoutek should take cognizance of Comet Ensur which was discovered in 1906, and Comet Westphal which was discovered in 1913. Both comets were predicted to be spectacular, based on their orbits and early observations. However, both comets grew very rapidly as they approached the sun and as they grew they became increasingly diffuse and faint, until they completely faded from view."

Kohoutek, hopefully, will be visible for several weeks for the numerous observers who are getting ready for it. The Skylab astronauts with their special instruments will be able to make observations when Kohoutek is nearest to the sun and with a special "far ultraviolet camera" will be able to tell if Kohoutek has a hydrogen halo.

The Orbiting Astronomical Observatory will observe the comet primarily as it recedes from the sun. According to Dr. Stephen P. Maran, head of NASA's Operation Kohoutek, OAO, "the best ultraviolet telescope ever orbited," will play a significant role in observing the new comet. OAO will aim its telescopes on the comet in early

February to measure and observe such things as the velocity and production rate of atomic hydrogen as well as the average temperature of hydrogen atoms.

Other observers include:

- The Mariner Venus-Mercury space probe whose television camera on board can be turned toward the comet.

- Observations at infrared wave lengths carried out by balloon-borne telescopes and from aircraft.

- A new "Airborne Infrared Observatory" consisting of a 36-inch reflecting telescope mounted in a C-141 aircraft to be used to search for the infrared "signatures" of cometary molecules.

- Dr. Frank Low of the University of Arizona will look for infrared radia-

tion from the comet with an eight-inch balloon-borne telescope.

- NASA's Laboratory of Solar Physics is erecting a Schmidt telescope at an altitude of 10,600 feet near Socorro, N.M.

- High altitude observatories in Arizona, Colorado and Hawaii will concentrate on Comet Kohoutek and at Goldstone, Calif., the 210-foot radar "dish" of the Jet Propulsion Laboratory may be used in an attempt to bounce a signal off the nucleus of the comet.

Comet Kohoutek should be visible from the Long Island area each day, weather permitting, in the southern sky, starting in early to mid-December and lasting until mid- to late January.

All told, Comet Kohoutek promises to be a spectacular show for just about everyone.



He's honored. Over 100 friends and business associates of Jean Esquerre, co-director of Grumman Aerospace's Opportunity Development Department, got together recently to honor him for contributions to affirmative action program and election to Board of Directors of Grumman Aerospace. Shown with Esquerre as he accepts testimonial from Bill Voorhest, also co-director of ODD, are his wife Maria Esquerre, Paul West (L), director Opportunity Development Office, Grumman Data Systems, and Bill Zarkowsky, Vice Chairman of Grumman Aerospace. (Photo by Larry Van Wallendael)

Announce varsity trials for men, women keglers

Things haven't been going too well for the Grumman varsity bowling teams in recent years. The men keglers haven't been able to get it all together since they last won the title in 1968, and the women lost the title they had held for several years to Pan Am last year. Both teams have to find the winning formula.

"You gotta believe" is the slogan for this year's squad and if you think you've got the magic to lead the varsity keglers to a championship why not enter the varsity bowling trials.

Here's how the varsity trials shape up:

- To be eligible, a contestant must have compiled an average for at least

Nichols, Oakley 'out-ring' all

Al Nichols grabbed top honors in the Plant 27 horseshoe singles tourney and just missed out in capturing the doubles title with partner, Paul Bosch. In singles action, Nichols knocked off Frank Carter, 22-19, 23-5 and 23-7, in the best-of-five final series.

In doubles play, Tom Kondos and Roy Harvey threw rings around the duo of Nichols-Bosch, winning 12-22, 22-3, 22-5, and 22-10. There were 12 team entries in the doubles and 22 entries in the singles tourney play.

And in the annual Bethpage horseshoe tournament, Jean Oakley accomplished the feat that eluded Nichols—winning both singles and doubles titles. Oakley, in the singles play with 10 entries, beat Griff Evans, 19-3, 25-9, 25-2, 25-3. Teaming up with Warren Frevert for the doubles competition, he crushed his old opponent, Griff Evans, who was teamed with Bob Safar, 21-18, 21-3, and 21-6.

24 games in an ABC league.

- The minimum entering average for men is 175.
- If a bowler competes in more than one league, his combined average must be at least equal to 175.
- Entry averages must be computed as of the week of December 7-14.
- Application blanks should be filled out completely and mailed to the GAA.
- Entry deadline: Friday, December 21.

Women's trials

The women's rollofs are coming up early next year too, and entry qualifications are the same as for the men, with one exception: the entering (or combined) average is 125 and the league should be WIBC sanctioned.

The women's and men's trials will be conducted at Mid Isle Lanes, Hempstead.

The men kick off the roll-off action on Saturday, January 12, continuing each Saturday through February 10. They will roll a total of 27 games, with the field reduced to 32 after 12 games (January 19), then further reduced to 24 after 18 games (January 26), with the top 10 remaining after 24 games (February 2).

The 10 varsity members will roll three more games on February 9 to determine the starting five in the L.I. Industrial tournament.

Candidates for the women's varsity will bowl a total of eight games, starting Saturday, Feb. 2 and finishing Feb. 9.

If you think you can help get the men's and women's team back on top, fill in the application contained on this page and send it off to the GAA, Plant 30.



Good times at Stuart

Although the weather was a little disappointing—there were occasional showers—the annual Grumman family picnic at Stuart, Fla., a couple of weeks ago was a big success in all other respects. Approximately 2,300 persons, including a number of retirees living in the area, attended the event. Among those on hand with General Manager Art Melrose to welcome the picnickers were Clint Towl, Board Chairman of Grumman Corporation, and Vice Chairman Bill Zarkowsky and Vice President Ed Dalva of Grumman Aerospace.

Of course there were games and races for the kids—both young and old—and during the day all were treated to a tasty picnic fare: southern fried chicken, hot dogs, hamburgers, beer, and soda.



Varsity Bowling Trials

Entry Blank

Name
Badge No. Plant Dept. Ext.

Qualifying Averages

Men (175) Dec. 7-14, inclusive Women (125) Dec. 7-14, inclusive

Average League & Lanes No. Games

Submit to GAA, Plant 30
by Friday, Dec. 21

Ramps rub out old mark; Nelson sets Trader record

What makes a person who has slaved over his work all day lug a 15-pound hunk of plastic and a pair of felt shoes to a bowling alley, then bowl at least three games? It must be the thing to do, though, because there are over 26 GAA registered bowling leagues. And that's a lot of bowling enthusiasts.

Cope's friends give HEART donation

This past summer, the people in the Calverton plants held a clambake in honor of Richard Cope, Grumman's heart transplantee, and presented him with a \$2,000 check for H.E.A.R.T. (heart emergency aid reaches transplants). HEART is a fund established at Stanford University's Medical Center to assist patients and their families with the living expenses connected with a heart transplant. Cope was the 26th recipient of a new heart at Stanford on October 15, 1970. Cope and his wife, Adelaide, recently journeyed to Stanford Medical Center to present the donation to Dr. Norman Shumway, head of the cardiac transplant team.

PERSONAL

Stella Havens, of Facilities Engineering Dept., Plant 6, expresses her sincere thanks to the supervisors and fellow workers for all the lovely flowers, cards and telephone calls during her recent illness.

service milestones

(Continued from page 4)

Joseph P. Milillo, Motivational Programs (5)
Maurice J. Lambert, Support (6)
Thomas P. Ivory, Resources (6)
Frank A. Gatz, Structures (7)
Gustave H. Tillwitz, Elect. Prod. Support (7)
George M. Lewis, Instrument Proj. (7)
Norbert C. Strohsnitter, P/S Mech. Eng'g Design (15)
Vera M. Senyk, Performance (25)
Herbert B. Hallock, Electro-Opt. Design (26)
Shirley Foley, Procurement Services (30)
Chauncey W. Turner, Info. & Rec. Services (35)
Stephen R. Juengst, Admin. Staff (35)
Joseph Kramer, Production (88)
Donald E. Clark, GDS



J. Cobre



A. B. Emmons

GRUMMAN, November 26, 1973

The Ramps of the Aerospace league rubbed out their old record of 2,047 high series and set a new mark at 2,156 behind the powerful scoring of Bob DeSantis, 208-555; Ted DiJa, 214-201-582; and Ed Lomot, 200-549. They also set a new team high with 795. Other Aerospace highlights: Tom Schindler, 216-577; Dennis Marrone, 205-226-563.

Frank Nelson scratched the old Trader league records, with a 213-215-223-651, while Sal Scalfani had 228-240-626, and Whitey Bodnarchuk had a rather successful night with 204-222-595.

And in the Masters league, there were three keglers over the 800 mark in the four-game series: Grover Hart, 233-829; Sid Kaufman, 245-817; Joe Avanzato, 807; Tom O'Connor 225-790; and Ted DiJa, 225-784.

Action highlights in the other leagues were:

Gold Mixed league: Werner Langhauser, 588; Diana Roche, 187; John Ketcham, 202-211-567. In the Outpost League, Frank Magri, 246-633; Manny Nach 213-587; John Welk, 262-576; Joe Avanzato, 201-565.

In the Patchogue Mixed: Joan Burgess, 195-510; Mick Scully, 223-586; Val Lindstrom, 166-462; Dick Lindstrom, 200-544; Dot Von Glahn, 174-445. Highlights of the Nite Owl league, Ernie Jenkins, 235-213-613. Tuesday Mixed action: John Kirk, 237-568; Martha Juppe, 183-468; Ruth Carr, 478.

And the pins went down in the Red league: Brian Scheu, 204-189-203-596; Ted Martines, 220-203-592; Red Rottman, 246-586. In the Black league, Nick Bilogan, 236-216-606; Bob Klussman, 225-215-605; Fred Wagnhauser, 214-603; Joe Aquilino, 224-204-602.



Sunshine kids. Although the golf season is never officially over in Florida, the Sunshine tee loop at the Stuart facility did wind up recently with Paul Dale (3rd L) and Bill Gruwell (4th L) in first place and Frank Fithian (L) and Bob Ludwig (2nd R) in second. Art Melrose (R), Stuart facility manager, presented trophies with assistance from league secretary Bob Howren (2nd L). (Photo from Stuart)

Tierney tours Calverton

Rear Adm. John Tierney, commander of Medium Attack and Tactical Electronic Warfare Wing, U. S. Pacific Fleet, visited Grumman on October 29. The Admiral's home base is NAS, Whidbey Island, where he serves as Commander of all A-6s and EA-6Bs on the West Coast.

His visit included a review of the production facilities at Calverton, a talk with Grumman Aerospace Board Chairman and President Joe Gavin, and an overview of the total Calverton capability, including the ATS and Anechoic Chamber.

Air Force honor

Joseph Nass, staff assistant to the director of Contracts and Estimating Pricing, has completed a total of 30 years service in the U. S. Air Force, both in active and reserve duty—attaining the rank of Colonel. And he was recently honored at the U. S. Air Force Headquarters in Washington, D. C. with the Air Force Commendation Medal for "his outstanding professional skill, knowledge and untiring efforts . . . (which) greatly enhanced the mission of the Judge Advocate General's Department Reserve."

Nass was assigned to the Judge Advocate General's Department Reserve at L. G. Hanscom Field, Massachusetts from 1964 to 1973. Brigadier General Harold Vague, Deputy Judge Advocate General, presented the award to the Colonel.



They're rolling along. Beautiful weather at Bethpage this fall was an added inducement to members of the bocce league at Plant 25, here lined up to mark the end of a successful campaign. According to 'commissioner' Frank Malone, competition in the loop was keen, with the Negotiators coming from fourth in regular league play to edge the Cross Fires in three straight matches to capture the playoff title. (Photo by Jim Wagner)

Call Calverton buffer zone critical for flight operations

In recent years, buffer zones have been used to separate deadly political enemies. Two weeks ago, Navy and Grumman officials met with about 60 political and civic leaders of Suffolk County and Riverhead Town to ask for an assured buffer zone around Calverton—this buffer zone, however, was requested so that the Company could continue as a good neighbor with surrounding communities.

During the 1½-hour meeting, Grover Nelson, the Chief of Naval Operations office in Washington, pointed out that should housing developments be allowed to grow in the vicinity of Calverton, jet engine noises would undoubtedly bring on a rash of complaints . . . and when enough complaints are registered, he said, it usually results in a sharp curtailment of air traffic which could threaten the survival of the facility.

And that possibility isn't far-fetched, said Nelson, ticking off statistics of other Navy bases around the country where the encroachment of homes forced severe operational curtailment, even abandonment at several airports. Should a move ever be necessary in the future, Nelson explained, the Navy faces replacement costs of more than \$60 million — that's at today's prices — for the various buildings at the Navy-owned installation.

Economic impact

What that would mean to Suffolk and to communities surrounding the facility was spelled out by Vice President George Skurla, general manager of Calverton Operations. Each year, said Skurla, Grumman pays about \$40 million in wages to the nearly 3,500 persons working at Calverton, and the Company spends an equal amount in goods and services in Suffolk County. But Skurla also acknowledged Grum-

man's responsibility to neighboring communities in trying to keep jet-engine noise to a minimum. Although jet noise is unavoidable for airport and flight testing operations, he said, he has taken steps to cut off jet engine runs after 8 p.m. except when they are critical to meeting production commitments. The Calverton general manager also announced that he had initiated a change in flight patterns to lessen the intrusion of jet noise in surrounding areas.

With Nelson and Skurla at the meeting sponsored by the Riverhead Chamber of Commerce were Capt. Bob Belter, Naval Plant Representative, Bethpage; Cdr. Jim Roth, Navy Resident-in-Charge at Calverton; Vice President Jack Rettaliata, director of Public Affairs for Grumman Corporation; and Administrative Vice President John O'Brien of Grumman Aerospace.

Attending the meeting also were Suffolk officials: Commissioner Gil Hanse, Department of Commerce and Industry; Director Fred Haenlem Jr., Department of Transportation and Franchises; Commissioner Robert Rosasco, Department of Aviation. Riverhead officials included Supervisor John Leonard; Councilmen George Young and Vincent Grodski; Town Justices Tom Costello and Robert Leonard; and Planning Board Chairman Frank Oalacek Jr. Also, John F. Luchsinger, Board Planning Chairman for Brookhaven Town.

Grumman and Navy representatives were offering their cooperation and assistance to local officials in an effort to prevent construction near the airport that might force its closing. Nelson pointed out that should these officials want to guarantee the security of Calverton from the threat of operational shutdown, they would have to



Meeting of chiefs. Col. Wendell (Wendy) Shawler (R), chief USAF F-15 test pilot, chats with Grumman Chief Test Pilot Chuck Sewell before test hop in F-14 Tomcat. Colonel Shawler came to Calverton a couple of weeks ago for a briefing and initial flights in the Tomcat, then traveled to the Naval Air Test Center at Patuxent River, Md., to pilot the F-14 in further test flights. The test series is part of the Navy/Air Force flight evaluation program on the F-14 Tomcat and F-15 Eagle. (Photo by Dick Sander)

consider zoning restrictions that would prohibit large developments, schools, sports arenas, hospitals—large groupings of people, in other words—in the Calverton buffer zone. At present, that area—facilities and outside buffer zone—totals about 7,000 acres.

Promise cooperation

Some of the things compatible with airport operations, Nelson said, are farming, wholesaling operations, and light industry so long as there are no electrical emissions that might interfere with flight operations at the Calverton facility.

Riverhead Town officials promised

their cooperation and said they will consider the Navy's zoning suggestions when making up the town's master plan for development. As Supervisor John Leonard explained, "It makes sense—Grumman is one of largest taxpayers in the town."

Wrapping up the meeting, Captain Belter admitted that dealing with the Government can be a frustrating experience—at times, he said, you just get shifted from one person to another without getting any satisfaction. Should there be any problems concerning the Navy operation at Calverton, he said, "Call me, the name is Belter."

DeForest, DiFalco new VPs at GDS

Derwin (Curt) DeForest and Dominic (Dick) DiFalco were elected Vice Presidents of Grumman Data Systems on Monday, November 19, at a Board of Directors meeting of the Grumman Corporation subsidiary. DeForest is director of Commercial Services and DiFalco director of the Grumman Account for GDS. Plane News was going to press when the announcement was made and will cover the two men in greater detail in the December 17 issue.

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